

Louisiana Department of Environmental Quality (LDEQ)
Office of Environmental Services

STATEMENT OF BASIS

Aniline 1 and 2 Plants
BASF Corporation
Geismar, Ascension Parish, Louisiana
Agency Interest Number: 2049
Activity Number: PER20030003
Draft Permit 2558-V1

I. APPLICANT:

Company:

BASF Corporation
P. O. Box 457
Geismar, LA 70734-0457

Facility:

Aniline 1 and Aniline 2 Plants
8404 Hwy 75
Geismar, LA 70734
St. Gabriel, LA 70776
Approximate UTM coordinates are 692.00 kilometers East and 3342.20
kilometers North, Zone 15
SIC Code: 2865

II. FACILITY AND CURRENT PERMIT STATUS:

The Aniline 1 and 2 Plants consist of production facilities that produce mononitrobenzene (MNB) as an intermediate and aniline as a finished product.

The facility submitted timely applications for initial Part 70 permits and continues to operate pursuant to the "application shield" provided in the program.

In addition, the facility has one state permit that will remain effective until replaced by a Part 70 permit. This is:

Permit #	Units or Sources	Date Issued
2044-M1	Aniline Plant 1	06/15/2001

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Several Part 70 permits addressing portions of the facility have already been issued. These include:

Permit #	Units or Sources	Date Issued
2459-V3	EO Process Equipment	03/30/2006
2028-V3	Specialty Amines Complex	12/25/2005
2582-V2	Surfactant Plant	06/29/2005
2039-V0	PVP Plant	04/11/2002
2559-V2	MDI-2 Plant	12/28/2001
2265-V4	Utilities	08/29/2001
2564-V1	Boilers Nos. 3 and 6	11/22/2000
2526-V1	Acetylene Plant	10/02/2000
2427-V0	Polyol/CCU Plant	11/21/2000
2094-V0	Glyoxal Plant	08/02/2000
2643-V0	TDI Plant	11/04/1999
2558-V0	Aniline 2 Plant	08/21/1998
2334-V0	MDI-1 Plant	01/23/2006

Several PSD permits addressing portions of the facility have already been issued. These include:

Permit #	Units or Sources	Date Issued
PSD-LA-613	Cogeneration Unit #2 Utilities Plant	12/30/1997

III. PROPOSED PERMIT / PROJECT INFORMATION:

Proposed Permit

A permit application and Emission Inventory Questionnaire dated February 24, 2003, were submitted requesting a permit renewal. Also a revised application was submitted on March 29, 2006.

Project Description

The proposed modifications are as follows:

1. Reconcile emission rates for the two existing Aniline Plant Flares (Emission Points 14-90 and 36-97) and Aniline Plant 1 Fugitives (Emission Point 15-90);
2. Revise emission calculations for the Aniline Plant Incinerator (Emission Point 12-90);
3. Add a flare, Emission Point ANI02, previously approved under an authorization-to-construct;

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4. Add a cooling tower, Emission Point ANI03, previously approved as a case-by-case insignificant activity; and
5. Delete Emission Point 37-97, Aniline Wastewater Tank.

Permitted Air Emissions

Estimated emissions in tons per year are as follows:

<u>Pollutant</u>	<u>Before</u>	<u>After</u>	<u>Change</u>
PM ₁₀	11.96	7.43	-4.53
SO ₂	0.03	0.03	-
NO _x	40.73	39.43	-1.30
CO	20.85	18.06	-2.79
VOC	10.19	7.20	-2.99

VOC LAC 33:III Chapter 51 Toxic Air Pollutants (TAPs):

<u>Pollutant</u>	<u>Before</u>	<u>After</u>	<u>Change</u>
Ammonia	1.07	0.12	-0.95
Aniline	2.78	2.49	-0.29
Benzene	2.49	1.81	-0.68
Chlorine	0.0	0.07	+0.07
Formaldehyde	0.0	0.02	+0.02
n-Hexane	0.0	0.09	+0.09
Hydrochloric Acid	0.06	0.07	+0.01
Mononitrobenzene	1.09	0.56	-0.53
Nitric Acid	0.001	<0.01	-
Sulfuric Acid	<0.01	<0.01	-

Regulatory Analysis

This permit was reviewed for compliance with 40 CFR 70, the Louisiana Air Quality Regulations, New Source Performance Standards (NSPS), and NESHAP. Prevention of Significant Deterioration does not apply.

This facility is a major source of toxic air pollutants (TAPs) pursuant to LAC 33:III.Chapter 51.

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Louisiana Air Quality Regulations and NSPS

The applicability of the appropriate regulations is straightforward and provided in Table 1 of the Air Permit Briefing Sheet. Similarly, the Monitoring, Reporting and Recordkeeping necessary to demonstrate compliance with the applicable terms, conditions and standards are provided in Tables 2 and 3.

Prevention of Significant Deterioration Applicability

The Aniline 1 and Aniline 2 Plants are existing facilities. Therefore, the PSD regulations do not apply.

MACT Requirements

The Aniline 1 and 2 Plants are classified as Synthetic Organic Chemical Manufacturing Industry (SOCMI) facilities, and will be subject to the Hazardous Organic NESHAP (National Emission Standards for Hazardous Air Pollutants) or HON. The Incinerator is subject to NESHAP Subpart EEE.

Air Modeling Analysis

Air Modeling Analysis is not required.

General Condition XVII Activities

The facility will comply with the applicable General Condition XVII Activities emissions as required by the operating permit rule. However, General Condition XVII Activities are not subject to testing, monitoring, reporting or recordkeeping requirements. For a list of approved General Condition XVII Activities, refer to Section VIII of the Part 70 permit.

Insignificant Activities

All Insignificant Activities are authorized under LAC 33:III.501.B.5. For a list of approved Insignificant Activities, refer to Section IX of the Part 70 permit.

IV. Permit Shields

A permit shield was not requested.

V. Periodic Monitoring

N/A

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VI. Applicability and Exemptions of Selected Subject Items		
ID No:	Requirement	Notes
	See Tables 2 and 3	

VII. Streamlined Requirements			
Unit or Plant Site	Programs Being Streamlined	Stream Applicability	Overall Most Stringent Program
N/A			

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Glossary

Best Available Control Technologies (BACT) - An emissions limitation (including a visible emission standard) based on the maximum degree of reduction for each pollutant subject to regulation under this part which would be emitted from any proposed major stationary source or major modification which the administrative authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification through application of production processes or available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of such pollutant.

Carbon Monoxide (CO) - A colorless, odorless gas which is an oxide of carbon.

Grandfathered Status- Those facilities that were under actual construction or operation as of June 19, 1969, the signature date of the original Clean Air Act. These facilities are not required to obtain a permit. Facilities that are subject to Part 70 (Title V) requirements lose grandfathered status and must apply for a permit.

Maximum Achievable Control Technology (MACT) - The maximum degree of reduction in emissions of each air pollutant subject to LAC 33:III.Chapter 51 (including a prohibition on such emissions, where achievable) that the administrative authority, upon review of submitted MACT compliance plans and other relevant information and taking into consideration the cost of achieving such emission reduction, as well as any non-air-quality health and environmental impacts and energy requirements, determines is achievable through application of measures, processes, methods, systems, or techniques.

New Source Review (NSR) - A preconstruction review and permitting program applicable to new or modified major stationary sources of air pollutants regulated under the Clean Air Act (CAA). NSR is required by Parts C ("Prevention of Significant Deterioration of Air Quality") and D ("Nonattainment New Source Review").

Nitrogen Oxides (NO_x) - Compounds whose molecules consists of nitrogen and oxygen.

National Emission Standards for Hazardous Air Pollutants (NESHAP) - Toxic air emission standards for specific types of facilities, as outlined in 40 CFR Parts 61 through 63.

Nonattainment New Source Review (NNSR) - A New Source Review permitting program for major sources in geographic areas that do not meet the National Ambient Air Quality Standards (NAAQS) at 40 CFR Part 50. Nonattainment NSR is designed to ensure that emissions associated with new or modified sources will be regulated with the goal of improving ambient air quality.

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Organic Compound - Any compound of carbon and another element. Examples: Methane (CH_4), Ethane (C_2H_6), Carbon Disulfide (CS_2)

PAI Pesticide Active Ingredient MACT - any facility that is subject to 40 CFR 63 Subpart MMM

Part 70 Operating Permit- Also referred to as a Title V permit, required for major sources as defined in 40 CFR 70 and LAC 33:III.507. Major sources include, but are not limited to, sources which have the potential to emit: ≥ 10 tons per year of any toxic air pollutant; ≥ 25 tons of total toxic air pollutants; and ≥ 100 tons per year of regulated pollutants (unless regulated solely under 112(r) of the Clean Air Act) (25 tons per year for sources in non-attainment parishes).

PM_{10} - Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by the method in Title 40, Code of Federal Regulations, Part 50, Appendix J.

Potential to Emit (PTE) - The maximum capacity of a stationary source to emit any air pollutant under its physical and operational design.

Prevention of Significant Deterioration (PSD) - A New Source Review permitting program for major sources in geographic areas that meet the National Ambient Air Quality Standards (NAAQS) at 40 CFR Part 50. PSD requirements are designed to ensure that the air quality in attainment areas will not degrade.

Sulfur Dioxide (SO_2) - An oxide of sulphur.

Title V permit - See Part 70 Operating Permit.

Volatile Organic Compound (VOC) - Any organic compound which participates in atmospheric photochemical reactions; that is, any organic compound other than those which the administrator of the U.S. Environmental Protection Agency designates as having negligible photochemical reactivity.